

Math 1015: Mathematics: An Exploration

Fall 2024

Section 03: TWF 11-11:50 Bannow 335

Section 04: TF 9:30-10:20, W 9-9:50 Bannow 334

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Office Hours: TF 10:30–11, 12:30–1, W 10–11, 12-1 or by appointment

All office hours are in my office, or on zoom: <https://fairfield.zoom.us/j/5514910533>

Final Exam Section 03: Monday December 16, 11:30AM; Section 04: Thursday December 12, 8AM

Course Website <http://faculty.fairfield.edu/cstaecker/courses/2024f1015>



Course Description

This course introduces various ideas in mathematics at an elementary level. It is meant for the student who would like to fulfill a core mathematics requirement, but who does not need to take mathematics for their major. Topics will vary, depending upon the instructor, but in general will include topics of both historical and current interest.

Mastery-based assessment

This course is graded based on *topic mastery*. The course material has been broken down into about 30 different specific objectives to master. Each student's progress on each objective will be tracked in a checklist.

Students demonstrate their mastery of each objective by correctly answering exam questions, each of which is clearly labeled as assessing one specific objective. If a student answers an exam question correctly, this objective will be marked as "mastered". Once an objective is mastered, the student does not need to answer any more questions addressing that objective.

There is no penalty if a student answers a question incorrectly, but this objective will remain unmastered. The student can master that objective by correctly answering questions on later exams. Each exam will include questions addressing *all* objectives covered so far, but students only need to answer questions covering objectives that they have not yet mastered.

Mastery progress on each objective is tracked as: mastered, half-mastered, or not mastered. Any objective which is not mastered or half-mastered may be reattempted on any future exam until it is mastered.

Exams

Exams will be in-class on Fridays: September 27, October 18, November 8, and December 6 (last day of class). If you will be missing an exam and want to make it up, you must tell the professor in advance. If you simply do not show up to an exam, you will probably not be able to make it up.

Each exam will include one question for each objective covered so far. Students may skip questions covering objectives that they have already mastered.

Students do not receive a “grade” for a completed exam, they simply are awarded mastery points on some of their objectives. Because of this, there is no traditional partial-credit for incorrect answers on exams.

Students will not use calculators or any other electronic gadgetry during exams.

Final exam

The final exam is your last chance to master any remaining objectives. Since there will be a regular exam on the last scheduled day of class, it is possible to master all objectives before the final exam. (In this case, you can skip the exam.)

Homework

Homework will be assigned each week, and are graded in the traditional way (not mastery-based). Assignments will be posted at the course website. Students are encouraged to work together on assignments, but each must hand in their own papers.

Homework questions are not always objective-specific, and are graded in the traditional way. That is, all students should answer all questions, and I will grade the answers based on correctness, with partial credit. No mastery credit is awarded for homework answers.

Homework will be due each Wednesday night at 11:59PM, with assignments covering the material from the previous week. All assignments will be handed in electronically at Gradescope.

Late homeworks without excuse will lose 1/3 credit for each calendar day.

Grading

Your course grade will be inspired by an average, with the lowest homework score dropped. The grading is in two categories:

Mastery	75%
Homework	25%

The Mastery grade is a percentage based on how many objectives you have mastered by the end of the course. Half-mastered topics get half credit.

Online submission

No assignments will be submitted on paper. All work will be submitted online at Gradescope.com. Students will take phone pictures of their work and submit it to Gradescope.

Should I show work?

The professor already knows the answers to the problems which are assigned, and so you do not need to tell him the answer. You need to demonstrate that you know how to derive the answer. Credit will not be given for answers which are given with no rationale or work shown, except in some rare cases where the problem is done entirely in your head.

Attendance

Attendance does not directly figure into your grade, so there is no penalty for missing class. Students who miss class are 100% responsible for making sure all assignments are still completed on schedule. The professor is happy to negotiate in case there are good reasons, but these negotiations must be initiated by the student.

Office hours

The Professor regards visits to office hours as part of the instruction for this course. Responsible students in this course are expected to visit the Professor occasionally for help with homework and other class material. Class assignments are meant to stretch the abilities of the students, and the Professor expects even the best students to benefit from individual discussion. Students are encouraged to come in small groups if they don't want to come alone.

Counseling services

Fairfield University provides mental health services to support the academic and personal success and well-being of students. Counseling & Psychological Services offers confidential psychological services to help students manage personal challenges that may interfere with your well-being. Counseling & Psychological Services is free for full-time undergraduate students.

For help, contact Counseling and Psychological Services at (203) 254-4000 ext 2146.